Warm Welcome to Niki Gribi, New Member Coordinator

by Brittany Quaglieri

Kristy Evansizer WSP's member coordinator for the past 3 years, has changed career paths! She is now an AmeriCorps member herself, serving with the AmeriCorps TOOTH Program in Eureka. Kristy will be missed but will always remain a member of the WSP family. With Kristy's departure we fondly welcome the new member coordinator, Niki Gribi.

While earning a degree in in Economics and a Masters in Statistics and Finance from UC Santa Cruz, Niki worked as a marketing assistant for California Certified Organic Farmers (CCOF) and as a teaching and research assistant in the Economics Department at the university. After graduating, she spent three years at Hidden Villa Farm and Wilderness Preserve working as an outdoor educator and farmer.

Her skills in environmental education, greenhouse management, running a small organic farm and a Community Supported Agriculture Program (CSA) make her a perfect fit and a wonderful addition to the WSP staff.

Niki is a world traveler and no stranger to volunteer work. During her high school years she lived in Japan and worked with Habitat for Humanity in the Philippines. While in Tokyo, Niki also helped make and distribute rice balls to homeless people. More recently, she has donated her time and sewing skills to create quilt squares for Salmon Creek Community School quilt raffles.

Please Email us with Questions!

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About the Watershed Stewards Project

The AmeriCorps Watershed Stewards Project (WSP) is a community based watershed restoration program. The program places 44 members in 14 communities throughout 7 counties in Northern California from San Francisco to the Oregon border. WSP's AmeriCorps members come from across the United States and are teamed up with top natural resource professionals who serve as mentors.

WSP partners include a unique collaboration of private industry, academic institutions, non-profit organizations, and local, state, and federal industries and agencies.

The mission of the AmeriCorps Watershed Stewards Project (WSP) is to conserve, restore, and enhance anadromous watersheds for future generations by linking education with high-quality scientific practices. A special project of the California Conservation Corps (CCC), WSP is administered by California Volunteers and sponsored by the Corporation for National and Community Service.

WSP members deliver science based curriculum on watershed processes and salmonid life cycles to K-12 students in local schools. WSP members also organize and implement an individual service project focusing on hands- on watershed restoration involving community members.

AmeriCorps Watershed Stewards Project

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AmeriCorps Watershed Stewards Project

Tributary Tribune

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The mission of the AmeriCorps Watershed Stewards Project (WSP) is to conserve, restore, and enhance anadromous watersheds for future generations by linking education with high-quality scientific practices.

Carpooling Just Got Even Sexier by Cori Hach

My favorite part about the WSP education curriculum is its focus on the simple idea that we humans live in a watershed, just like the salmon. We teach the students that *all* activities within a watershed affect the species that live in the rivers and streams because everything is interconnected. Emphasizing this concept has the result of promoting thoughtfulness, and it's really neat to get a whole classroom of kids to make the connection between a disintegrating dirt logging road and deadly sediment loads in the river. We fish-lovers tend to concentrate our efforts on these sorts of in-watershed efforts: reducing erosion, conserving water, increasing riparian vegetation, removing barriers to fish passage, adding in-stream habitat.

Salmon, however, do not *only* live in watersheds. They evolved to exploit the most advantageous elements of a number of different habitats—stream, river, estuary, ocean—at different stages of their lifecycle. Anadromy is the reason why salmon are so incredibly special, but it is also one of the reasons they are currently so vulnerable: even if we could restore all salmon-bearing streams and rivers to a pristine state, salmon would still face a gauntlet of threats borne from changing ocean conditions. Since the Institute for Fisheries Resources is probably the WSP site most focused on the marine side of the salmon lifecycle, I thought people might be interested in hearing a little bit about the new global crisis on the block—ocean acidification.

As context-savvy readers will presume, ocean acidification is a process by which seawater becomes more acidic. The reason for this change? Carbon. The ocean acts as an enormous sink, absorbing about one third of the carbon that is released into the atmosphere. Ocean acidification is for saltwater bodies what climate change is for

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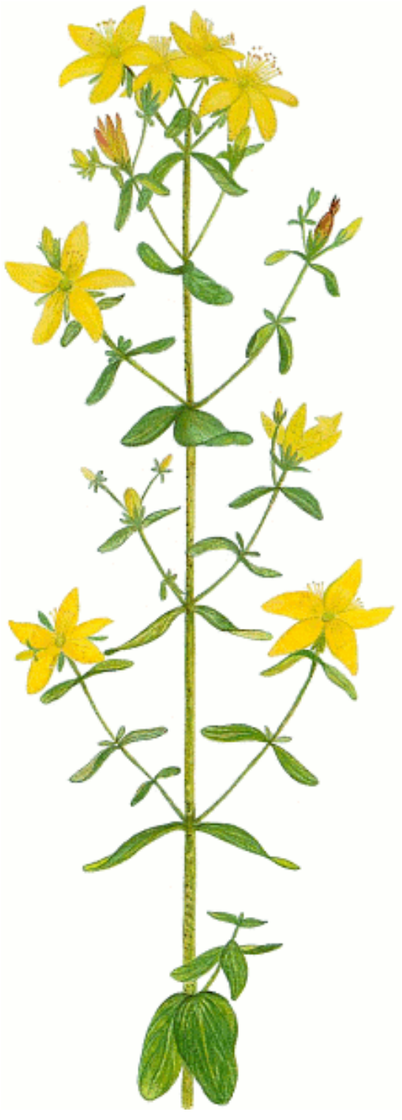
Inside This Issue

Service is the rent you pay for having room on Earth. - From a fortune cookie

Medicinals When You're in the Mad by Charles Schembre



I spent the majority of my summer field work surveying the conditions of roads and culverts in the headwaters of the Mad River Watershed around Jones Ridge and Kelsey Peak within the Six Rivers National Forest.

The conditions were rugged and spent in solitude. Nights were quiet, timeless, and full of soothing orchestras of chirps, croaks, howling, hooting, rustling, and other unidentified sounds. Tuning into the wilderness and becoming a part of the wilderness, allows one to seek the wilderness within their mind.

At times I felt as though Native American blood was injected into my veins, and that I was receiving visions and spiritual guidance from the Creator. A conversation with a half blooded Wailaki on Jones Ridge alerted me to the sacredness of the land that the Forest Service had plowed through and carved with roads. I became very spiritually connected to the land that I was working in, and my passion for learning the medicinal properties and uses of plants blossomed.

At the beginning of the summer I took great notice of the bounty of plants that were edible, and/or had medicinal and spiritual healing properties. But this territory was new to me, and I found a deeper connection with land by most of my spare time around camp making decoctions and teas with the plants within the Upper Mad Watershed.

Below is a list of common plants that I used in my diet for nutrition, medicinally, as an alleviant, or observed throughout the summer. Please education yourself about a specific plant before using it in your diet. Some literature states that plants below are toxic in high concentration. There were many other plants that I was unable to identify, or was unsure of their toxicities, so I have not included them.

Left: Klamath Weed. Above: Huckleberry.

Manzanita *Arctostaphylos spp.*
Blue Elderberry *Sambucus caerulea*
Oregon Grape *Berberis spp.*
Huckleberry *Vaccinium ovatum*
Yarrow *Achillea millefolium*
Yerba Santa *Eriodictyon californicum*
Penny royal *Monardella odoratissima*
Coyote Mint *Monardella villosa*
Mugwort *Artemisia vulgaris*
Blackberry *Rubus ursinus*
Klamath Weed (St. Johnswart) *Hypericum perforatum*
Gooseberry *Ribes spp.*
White Oak *Quercus alba*
Tan Bark Oak *Lithocarpus densiflorus*
Soap Plant *Chlorogalum pomeridianum*
Miners Lettuce *Claytonia perfoliata*
Siberian Candyflower *Claytonia sibirica*

Urban, Native American Relics
by Chris Bell

Here is a picture of a Native American mortar that I found in one of the urban creeks Teri and I were habitat typing.

While we were working, a landowner came out and told us about the arrowheads she's found in the streambed. We walked a short distance upstream and saw this artifact sticking out of the mud.

The mortar is usually accompanied by a grinding pestle, but we did not find this piece. The mortar and pestle are traditionally used to grind acorns into an edible mush, or soup. Acorns were an extremely important food source for California's Native Americans due the wide distribution of several acorn-bearing tree species within the state. Some tribes continue to produce food from acorns as this remains an important part of their culture. Acorns could also be stored for up to two years as insurance against years of poor acorn production.

We decided to leave the artifact where it was found, take photos, and mark the location on our topographic map. This information was then forwarded to the Graton Rancheria Tribe for their use. The experience was much cooler than finding the usual garbage that seems to litter most of the urban streambeds.

Restoration Day by Blaine Vossler

Up early. Eat breakfast – many calories to burn.
Though the temp will soon reach 90, long sleeves must be worn.
For my enemy is crafty, and has the devil's soul
and if it bites my unclothed arm, it leaves a gaping hole.
A pleasant drive now to the site, before the war ensues
where I size up the enemy and solemnly peruse
the gleaming lot of weaponry - assessing its appeal.
Clippers, shovel, trowel and pick; I arm myself with steel.
Soon the soldiers, they arrive, bathed in morning light,
we clad our hands in leather gauntlets, then prepare to fight.

Soon unfolds the grizzly scene, it's us against a thorn machine.
We find ourselves caught in between gnashing teeth of emerald green.

Tentacles like hydra heads that feed on volunteers -
for every single head you sever, another one appears.
Amidst the melee I can see where several emanate
I trace their length down to the earth where the demon's heart doth wait.
I boldly plunge my battered shovel deep into the ground
I dig and pry with all my might and Hark! - a lovely sound:
The tendons of our hideous beast do snap and break apart.
I lift my shovelful of dirt and unearth the ugly heart.
Hours pass and sweat it flows, and as we work my hunger grows,
so I pick a bloody, bulbous berry and in my mouth it goes.
Alas, at one, our work is done, and clean-up must begin -
a wheelbarrow rolls along and the dead are piled in.
And as we leave to nurse our wounds I hear the bramble say:
"Have a nice one sucker; I'll see YOU next Saturday!"

Engineering Our Way Back to Nature

by Cameron Jaggard

Bioengineering is a meshing of earth science and engineering. Where typical engineering projects would employ the use of steel and concrete to tame an eroding stream bank, bioengineering enlists the aid of woody debris, live willows, boulders, and gravel to reach much the same end.

These techniques might seem archaic to the engineering purist, but their results are hard to argue with. Incorporating live plant material into the design of an erosion control structure means that the project grows and strengthens as time goes on. Not only does the structure become a type of living machine, but the use of natural materials also means that the areas sense of place is not impaired by man-made structures, such as concrete weirs and uniform riprap.

On a recent watershed restoration tour of the Russian River, I was given the opportunity to visit several bioengineering sites located in the Odd Fellows Residential Community, Guerneville, CA. The community had suffered a number of near catastrophic bank failures that threatened septic systems, recreational areas, and several structures on-site. John Gardner and Evan Engber, of Bioengineering Associates, led us through the project site and highlighted each of the nine different techniques they found necessary to restore the damaged sections of stream bank. Many of the restoration areas had just been finished and work crews were watering the 5 to 8 foot long sections of willow that had been hammered in-between small boulders to help stabilize the bank.

As I reveled at the unimposing nature of these freshly completed bioengineering structures, I couldn't help but be excited by the thought that in 10 to 25 years I might not even be able to locate where the project ends and nature begins.

Fish Fridays!

Submitted by Amber Villalobos

Students at Washington Preparatory School are excited for Fish Fridays when AmeriCorps members bring Salmon into the classroom.

In the picture above is WSP member, Amber Villalobos, with one of her *Real Science* students donning a fish hat.

The photo to the left is another student wearing the typical Habitat Typing gear which many WSP members wear while working in the field.

He's wearing waders and a field vest while holding a stadia rod and measuring tape. In his pocket are the nails used to secure the measuring tape between the creek banks.

The best time to plant a tree was 20 years ago. The next best time is now. - Chinese Proverb

HABITAT WORD SEARCH!

MILT	CUTTHROAT
VEGETATION	CHINOOK
ANADROMOUS	ALEVIN
ENDANGERED	REDD
SOCKEYE	WATER
EGG	INVERTEBRATES
COOL	WILD
SPAWNER	PREDATOR
ADULTS	SALMONID
UPSTREAM	WATERSHED
HABITAT	COBBLE
COHO	SMOLT
BIODIVERSITY	HATCHERY

R	Y	R	X	O	Z	N	M	L	A	I	K	M	Q	B	N	T	D	K	C
D	S	D	L	I	W	S	D	K	U	J	P	N	S	Y	R	F	Y	E	U
B	E	N	O	I	T	A	T	E	G	E	V	S	M	O	L	T	C	U	T
U	T	H	S	A	S	A	T	A	R	H	U	F	T	U	W	E	O	A	T
F	A	S	S	S	D	Y	Y	Q	T	E	P	F	Z	P	E	Y	B	I	H
X	R	Y	A	R	P	U	B	T	I	I	G	I	F	U	S	E	B	P	R
D	B	H	P	L	E	E	L	C	Z	L	B	N	A	F	G	K	L	V	O
D	E	A	U	Z	M	T	H	T	O	Q	V	A	A	G	C	C	E	U	A
E	T	M	E	I	V	O	A	Z	S	H	Z	P	H	D	P	O	P	P	T
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A	G	A	R	D	X	T	R	W	Q	Y	K	O	O	N	I	H	C	E	N
E	D	Y	I	J	F	E	B	I	O	D	I	V	E	R	S	I	T	Y	S
H	A	T	C	H	E	R	Y	D	N	U	D	G	A	F	C	S	L	J	R
I	D	F	S	U	O	M	O	R	D	A	N	A	I	N	R	M	N	L	B

Carpooling Just Got Even Sexier **by Cori Hach**

(Continued from page 1)

terrestrial systems—the environmental response to elevated levels of carbon dioxide.

When CO_2 interacts with H_2O, it produces carbonic acid, or H_2CO_3. Carbonic acid disassociates in water, separating into bicarbonate, HCO_3, and hydrogen ions, H^+. As the number of positive hydrogen ions in the water increases, the overall pH goes down. On the pH scale, the more acidic a substance, the lower it reads on the scale—battery acid, for example, has a pH of zero. So more carbon dioxide added to the atmosphere means more carbon dioxide dissolving in the ocean and undergoing these chemical reactions, turning the water measurably more acidic.

Ocean acidification is a major concern for many parties—the UN warned that immediate action is critical in a declaration backed by 150 scientists, and the EPA is in the process of determining how it will modify its pH standards to address acidification. Still, despite all this momentum toward action, it is unclear exactly how far-reaching the impact of ocean acidification could be. The best-documented effects have had to with how acidity decreases the ability of crustaceans, shellfish, corals, and plankton to construct and maintain hardened shells and calcified parts. Increased acidity may also interfere with the sense of smell, and therefore navigational abilities, of some fish. It is unclear if there is a specific acidity threshold above which there will be widespread collapse. What is clear is that the transformation is occurring at a rate that is likely faster than anything marine life has ever had to cope with.

The point, of course, is that this affects the organisms that compose the very foundations of the marine food web. If ocean acidification causes a decrease in biomass at the lowest trophic levels, then the high-level predators that depend on plankton and krill will be devastated—predators like Pacific Salmon. Salmon live in watersheds, but also in the ocean. People live in watersheds, but also on the planet. Our actions and consumption habits affect an area much greater than our immediate vicinity. One hundred percent of the fossil fuels we use reach the ocean eventually, whether by draining through the watershed or by circulating through the atmosphere, changing the very chemistry of the seawater in a way that much marine life may not be equipped to handle. To conclude, local, watershed-based salmon recovery efforts are wonderful and effective, but don't forget to carpool for the salmon, too.

Pacific Northwest Wonders Winners!

Above: Best in Show by Charles Wickman. Chinook salmon making its way upstream one of the Klamath's many tributaries.

Best in Salmon & Trout Category by Dave Kajtaniak. Coho salmon carcass on Freshwater Creek.

Why this photo contest was created

The AmeriCorps Watershed Stewards Project has been active on the North Coast since 1994, working to conserve, restore and sustain anadromous (salmon and steelhead bearing) watersheds for future generations. WSP members have the unique opportunity to serve as catalysts in the community to bring our diverse interests together. The purpose of the contest is to unite this community by fostering an appreciation and respect of healthy, diverse landscapes and wildlife through photography. Our hope is that this contest will show people the beauty of healthy rivers and wildlife, as well as encourage them to actively support our North Coast watersheds.

Many, Many Thanks

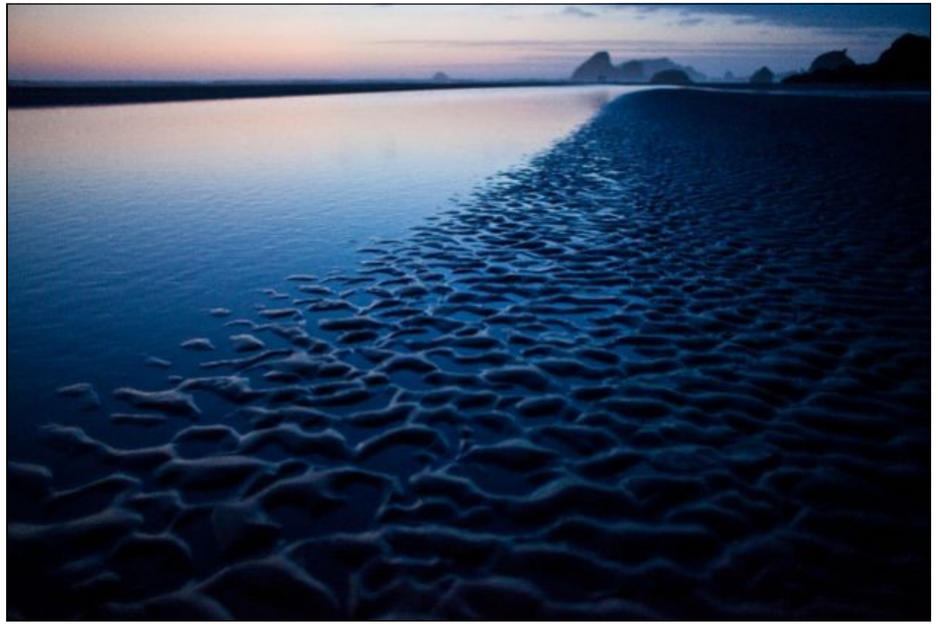
There are many organizations and local businesses to thank for their support and participation in this event. Without them it would not be possible: Eel River Watershed Improvement Group, California Conservation Corps, Swanlund's Camera and Old Town Coffee and Chocolates.

The prizes awarded to the winners are donated by local businesses and services including Arcata Scoop, The Art Center, Bubbles, Finnish Country Hot Tub and Sauna, Garden Café, Mad River Gardens, Mamma Lama Coffee Shop, Northtown Books, Olsen Stoneware, The Scotia Inn and The Works.

Additional Information

These photos, and a handful of honorable mentions, will be on display at Old Town Coffee and Chocolates for the remainder of the month. They made their public debut at Arts Alive on Saturday, November 7.

For more information regarding the Pacific Northwest Wonders Amateur Photography Contest, or the AmeriCorps Watershed Stewards Project, please contact us at (707) 725-8601 or visit the website at www.WatershedStewards.com.



Best in Landscape Category by Oliver Hulland. Fading light and low tide at Moonstone Beach.

Best in Wildlife Category by Bob Mason. Chipmunk hanging out in an old pipe.

I didn't want to tell the tree or weed what it was.

I wanted it to tell me something and through me express its meaning in nature. - Wynn Bullock